

Coprological Diagnosis of Gastrointestinal Parasites in Captive Primates in Peninsular Malaysia

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Abstract

The present study was undertaken to determine the prevalence of gastrointestinal parasites in captive primate populations in three Zoos in Peninsular Malaysia. A total of 52 faecal samples were collected from the enclosures of five species of local primates comprising Orang Utans (*Pongo pygmaeus*), White-Handed Gibbons (*Hylobates lar*), Siamangs (*Symphalangus syndactylus*), Stump-tail Macaques (*Macaca arctoides*) and Slow Loris (*Nycticebus coucang*). The samples were subjected to Formal-Ether sedimentation, Ziehl-Neelsen and Giemsa staining for microscopy detection of helminth ova and protozoan cysts. PCR with species-specific primers were used to detect *Cryptosporidium*. A total of 46 (88%) faecal samples were positive for various parasites by microscopy. The most common parasite harboured by the captive primates was *Entamoeba* (65.4%), followed by Strongyles (40.4%), *Strongyloides* (15.4%) and *Cryptosporidium* (9.6%). *Balantidium* and *Trichuris* showed relatively low infection rates (1.9%). PCR assay had a higher sensitivity (15.4%) for the detection of *Cryptosporidium* compared to conventional microscopy and Ziehl-Neelsen staining (9.6%). The high rate of infection with *Entamoeba* and *Cryptosporidium*, and the presence of *Balantidium* in the captive primates are of concern as they pose a potential zoonotic risk to animal handlers, keepers and the public.

Keywords: Gastrointestinal parasites, primates, PCR